

CCGGGGGAGGCTCTTAGGATGTTGTGCTCCGCGGGGCTCAGACGAAATCTTCTGTGAATGGAAG
AAATGCTTCCAAGCAAACAGCCACTACCAGAACAACCTGAGAAAGAGGCCAGAGCGCGAGTTCTC
AAACCCTGATTTTCGAGGAGCCGAGGGGGATATTGGAGAGAAGGTATTTCCAGTCACGCGCAG
TAACAGACCAGCCAAGGACCAGGACTGGAGTTCTGTTCTACAACGGTGGAACAGTGAACGGTCT
CCAAAGAGATGGAGTACGACGCTTACAACGACTCCGGCATCTATGATGATGAGTACTCTGATGG
CTTTGGCTACTTTGTGGACTTGGAGGAGGCGAGTCCGTGGGAGGCCAAGGTGGCCCCGGTCTTC
CTGGTGGTGATCTACAGCTTGGTGTGCTTCCTCGGTCTCCTAGGCAACGGCCTGGTGATTGTCA
TCGCCACCTTCAAGATGAAGAAGACCGTGAACACTGTGTGGTTTGTCAACCTGGCTGTGGCCGA
CTTCCTGTTCAACATCTTTTTGCCGATGCACATCACCTACGCGGCCATGGACTACCACTGGGTG
TTCGGGAAGGCCATGTGCAAGATCAGCAACTTCTTGCTCAGCCACAACATGTACACCAGCGTCT
TCCTGCTGACTGTCATCAGCTTTGACCGCTGCATCTCCGTGCTGCTCCCCGTCTGGTCCCAGAA
CCACCGCAGCATCCGCTGGCCTACATGACCTGCTCGGCCGTCTGGGTCTGGCTTTCTTCTTG
AGCTCCCCGTCCCTTGTCTTCCGGGACACCGCCAACATTCATGGGAAGATAACCTGCTTCAACA
ACTTCAGCTTGGCCGCGCCTGAGTCCTCCCCACATCCCGCCCACTCGCAAGTAGTTTCCACAGG
GTACAGCAGACACGTGGCGGTCACTGTACCCGCTTCCTTTGCGGCTTCCTGATCCCCGTCTTC
ATCATCAGGCCTGCTACCTTACCATCGTCTTCAAGCTGCAGCGCAACCGCCTGGCCAAGAACA
AGAAGCCCTTCAAGATCATCATCACCATCATCATCACCTTCTTCCTCTGCTGGTGCCCTACCA
CACCTCTACCTGCTGGAGCTCCACCACACAGCTGTGCCAAGCTCTGTCTTCAGCCTGGGGCTA
CCCCTGCCACGGCCGTGCGCATCGCCAACAGCTGCATGAACCCCATTCGTGTACGTCTTCATGG
GCCACGACTTCAGAAAATTCAAGGTGGCCCTCTTCTCCCGCCTGGCCAACGCCCTGAGTGAGGA
CACAGGCCCCCTCCTCCTACCCCAGTCACAGGAGCTTACCAAGATGTCGTCTTTGAATGAGAAG
GCTTCGGTGAATGAGAAGGAGACCAGTACCCTCTGAACCTCACCTGGGAATGTCCCCCAAAGGT
GCCACGGCCCAGGGACGCCTAGGGACTTGTCTCCGGAAGTGAGGAGACATGCCGGGAGCCTTTGG
GAATGCTCCAACGCCCACTGAATTTTGCACAAGGCGGCTCATGTTTTAAGTGGGGTTCCCAAGT
GTGGACACTCTTCCAGTAAAATGGCAGGCAAGCAACCCGAGCTTCTACAACAGGAGCAGGGGAC
CGACTGTGACTGACTCAGAAAAGGGAGCATTCTGAAGCCAAGACTTGAGCTGTGACCAACATA
CAGGCCAACATACAGATGTCGCCGTGCATGCCCTGAACATGCTGCGCAGTTTTCGTGGGTGAG
GAAGTTACCGCAAACCCATTGCAGACCTGTTATGGCAACATGACAGTCAAACCAACAAAGCCCA
ATACACCCCAACATCCTCCAAGACCTTGACTTTGGATTTCAGAAGAACGGGGGGTGGGGGGAAC
GAGGACCTGAGGGTTAATTTTCGAGCTTGGCGAAGCC (SEQ ID NO:1)

FIGURE 1

underlined = deleted in targeting construct

[] = sequence flanking Neo insert in targeting construct

CCGGGGGAGGCTCTTAGGATGTTGTGCTCCGCGGGGCTCAGACGAAATCTTCTGTGAATG
GAAGAAATGCTTCCAAGCAAACAGCCACTACCAGAACAACAGAGAAAGAGGCCAGAGCGC
GAGTTCTCAAACCCTGATTTTCGAGGAGCCGAGGGGGATATTGGAGAGAAGGTATTTCC
AGTCACGCGCAGTAACAGACCAGCCAAGGACCAGGACTGGAGTTCTGTTCTACAACGGTG
GAACAGTGAACGGTCTCCAAAG [AGATGGAGTACGACGCTTACAACGACTCCGGCATCTA
TGATGATGAGTACTCTGATGGCTTTGGCTACTTTGTGGACTTGGAGGAGGCGAGTCCGTG
GGAGGCCAAGGTGGCCCCGGTCTTCCCTGGTGGTGATCTACAGCTTGGTGTGCTTCCTCGG
TC] TCCTAGGCAACGGCCTGGTGATTGTCATCGCCACCTTCAAGATGAAGAAGACCGTGA
ACACTGTGTGGTTTGTCAACCTGGCTGTGGCCGACTTCCTGTTCAACATCTTTTTGCCGA
TGCACATCACCTACGCGGCCATGGACTACCACTGGGTG [TTCGGGAAGGCCATGTGCAAG
ATCAGCAACTTCTTGCTCAGCCACAACATGTACACCAGCGCTTCCCTGCTGACTGTCAATC
AGCTTTGACCGCTGCATCTCCGTGCTGCTCCCCGCTCGGTCCCAAGAACCCGACGATC
CGCCTGGCCTACATGACCTGCTCGGCCGCTCGGGTCCCTGGCTTTCTTCTTGAGCTCCCCG
TCCCTTGCTCTTCCGGGACACCGCCAACATTTCATGGGAAGATAACCTGCTTCAACAACCTT
AGCTTGGCCGCGCCTGAGTCTCCCCACATCCCGCCCACTCGCAAGTAGTTTCCACAGGG
TACAGCAGACACGTGGCGGTCACTGTACCCGCTTCCCTTTCGCGCTTCCCTGATCCCCGTC
TTCATCATCACGGCCTGCTACCTTACCATCGTCTTCAAGCTGCAGCGCAACCCGCTGGCC
AAGAACAAGAAGCCCTTCAAGATCATCATCACCATCATCATCACCTTCTTCCCTCTGCTGG
TGCCCCCTACCACACCTCTACCTGCTGGAGCTCCACCACACAGCTGTGCCAAGCTCTGTC
TTCAGCCTGGGGCTACCCCTGGCCACGGCCGTCGCCATCGCCAACAGCTGCATGAACCCC
ATTCTGTACGTCTTTCATGGGCCACGACTTCAGAAAATTCAAGGTGGCCCTCTTCTCCCGC
CTGGCCAACGCCCTGAGTGAGGACACAGGCCC] CTCCTCCTACCCAGTCACAGGAGCTT
CACCAAGATGTCGTCTTTGAATGAGAAGGCTTCGGTGAATGAGAAGGAGACCAGTACCCCT
CTGAACCTCACCTGGGAATGTCCCCCAAAGGTGCCACGGCCAGGGACGCCTAGGGACTT
GTCTCCGGAAGTGGGAGACATGCCGGGAGCCTTTGGGAATGCTCCAACGCCCACTGAATT
TTGCACAAGGCGGCTCATGTTTTTAAGTGGGGTTCCCAAGTGTGGACACTCTTCCAGTAAA
ATGGCAGGCAAGCAACCCGAGCTTCTACAACAGGAGCAGGGGACCGACTGTGACTGACTC
AGAAAAGGGAGCATTTCTGAAGCCAAGACTTGAGCTGTGACCAACATACAGGCCAACATA
CACGATGTCGCCGTGCATGCCCTGAACATGCTGCGCAGTTTTTCGTGGGTGAGGAAGTTAC
CGCAAACCCATTGCAGACCTGTTATGGCAACATGACAGTCAAACCAACAAAGCCCAATAC
ACCCCAACATCCTCCAAGACCTTGACTTTGGATTTCAGAAGAACGGGGGTGGGGGAAC
GAGGACCTGAGGGTTAATTTCGAGCTTGGCGAAGCC

FIGURE 2A

Gene Sequence Structure

*

422 bp

Sequence Deleted

576 bp

Size of full-length
cDNA: 1892 bp



Targeting Vector* (genomic sequence)

Construct Number: 993

Arm Length:

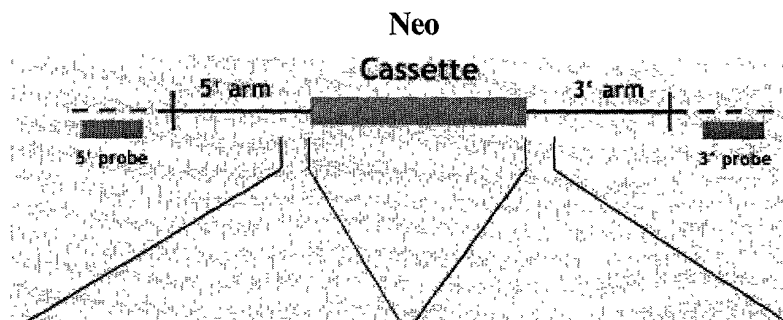
5': 2.3 kb

3': 1.9 kb

Targeting Vector

Targeting Vector
- - - - - Endogenous Locus

* Not drawn to scale



<p>5' > CCACAGAGGTCCTCAGCCTGT GACCCCTGTCTTCCCTCACAGAGAT GGAGTACGACGCTTACAACGACTC CGGCATCTATGATGATGAGTACTC TGATGGCTTTGGCTACTTTGTGGA CTTGGAGGAGGCGAGTCCGTGGGA GGCCAAGGTGGCCCCGGTCTTCCT GGTGGTGATCTACAGCTTGGTGTG CTTCCTCGGTC<3' (SEQ ID NO:2)</p>	<p>5' > TTCGGGAAGGCCATGTGCAAG ATCAGCAACTTCTTGCTCAGCCAC AACATGTACACCAGCGTCTTCCTG CTGACTGTCATCAGCTTTGACCGC TGCATCTCCGTGCTGCTCCCCGTC TGGTCCCAGAACCCGCGAGCATC CGCCTGGCCTACATGACCTGCTCG GCCGTCTGGGTCTGGCTTTCTTC TTGAGCTCCCC<3' (SEQ ID NO:3)</p>
--	---

FIGURE 2B